

**Another innovation from  
LEROY-SOMER!**



## Permanent magnet synchronous drives

**R**educing CO<sub>2</sub> emissions is one of the major challenges we face in saving the environment. With industry responsible for more than 70% of electricity consumption, motorised applications have the potential for considerable savings to be made.

The use of variable speed and optimisation of mechanical systems are the main routes to achieving maximum savings.

**DYNEO**<sup>®</sup>, at the cutting edge of commercially-available variable speed technologies, brings together all **LEROY-SOMER's** permanent magnet solutions for drives and synchronous motors.

The **DYNEO**<sup>®</sup> range includes the following series:

◆ **LSRPM enclosed synchronous motor:**

- IP 55 construction in accordance with IEC 60034
- Power rating from 0.75 to 400 kW
- Torque from 1 to 1400 N.m
- Speed from 1 to 5500 min<sup>-1</sup>
- Frame size from 90 to 315 mm

#### ◆ **LSHPM open synchronous motor:**

- IP 23 compact construction
- Power rating from 12 to 600 kW
- Torque from 1000 to 2800 N.m
- Speed from 1 to 3600 min<sup>-1</sup>
- Frame size 250 and 280 mm

#### ◆ **DYNEO®, INNOVATION:**

By reducing rotor losses, the patented radial magnet rotor technology **greatly improves the drive's efficiency and specific output power.**

With the **LSRPM** series, this innovative technology is now available in an IP 55 IEC mechanism, the most commonly used throughout the industry.

The **length of** motors in the **LSHPM** series, which are encased in an **IP 23 mechanism, has been reduced by 30%**, thanks to a toothed winding design.

#### ◆ **DYNEO®, ENERGY SAVINGS:**

At rated speed, motors in the **DYNEO®** range have **significantly better efficiency than high-efficiency induction motors.**

This difference in efficiency becomes even more significant when operating below rated speed, which is by definition the case in variable speed applications!

**The return on investment time compared to a conventional solution is very often less than 12 months.**

#### ◆ **DYNEO®, TORQUE and SPEED performance:**

With **guaranteed torque over very wide speed ranges**, without derating or forced ventilation, **DYNEO®** is also the simple and efficient solution for applications requiring high torque at high speed.

Motors in the **DYNEO®** range are designed to rotate faster than induction motors, which allows:

- **The motor speed to be adapted to that of the driven machine**, eliminating transmission devices such as gearboxes
- **Enhanced performance of the driven machine**, by increasing its speed.

## ◆ **DYNEO®**, COMPACTNESS and MODULARITY:

The **LSRPM** motor, with an available power range up to 400 kW in an aluminium frame, is **significantly smaller and lighter** when compared with a conventional induction motor of the same power rating.

With the **LSHPM** motor it is possible to obtain **unrivalled output power**: up to 600 kW for frame size 250 mm, for instance.

These much more compact solutions have a number of advantages: reduction in size of the chassis supporting the motor and hence the client machine, ease of installing the motor on site, simplification of lifting equipment, reduction in transport costs, etc.

The modularity of the series in the **DYNEO®** range with their foot mounted, flange mounted or face mounted configurations, plus the numerous associated options, makes it easy to replace any conventional drives already installed.

## ◆ **DYNEO®**, MAINTENANCE SAVINGS:

The low losses of magnet rotor technology reduce temperature rise in the bearings to a marked extent. This results in a corresponding reduction in the frequency of bearing greasing intervals or increases the motor service life.

**DYNEO®**: the **cost-effective, high-performance variable speed solution** which more than meets the expectations of machine users and integrators in the fields of application and use for induction motors: pumping, ventilation, compression, conveying, extrusion, process control, generators, etc.

*Emerson Industrial Automation, a business of Emerson, is a global technology provider that enables productivity, efficiency and quality gains for customers across a spectrum of industries. Our products include alternators, electric motors and drives, electrical distribution devices and mechanical power transmission, fluid automation and ultrasonic joining solutions. Emerson brands include Appleton, ASCO, Branson Ultrasonics, Browning, Control Techniques, Kop-Flex, Leroy-Somer, McGill, Morse, Numatics, O-Z/Gedney, Rollway, SealMaster, and System Plast. For more information, visit [www.EmersonIndustrialAutomation.com](http://www.EmersonIndustrialAutomation.com).*